REMARKS

The prior art cited by the Examiner in the rejections has been carefully reviewed. Applicant addresses each of these rejections below.

Rejection of claim 1 under 35 U.S.C. 102(b)

The Examiner cited Schneider (6,162,290) for teaching all the elements of claim 1. The Examiner argued that Applicant's amendments (reflecting composition percentage ranges for each of the constituent parts of the release agent) do not overcome the Examiner's rejection in the previous office Action. In the previous office action, the Examiner cited Schneider for disclosing a release agent containing mineral oil, water, and surfactant (with reference to Example 2).

In order for a section 102(b) reference to be valid as prior art, every element and limitation of the claimed present invention - as literally defined in the claims - must be disclosed within the piece of prior art. *Jamesbury Corp. v. Litton Indus. Products*, 756 F.2d 1556, 225 USPQ 253 (Fed.Cir. 1985); *Atlas Powder Company v. du Pont*, 750 F.2d 1569 (Fed.Cir. 1984); *American Hospital Supply v. Travenol Labs*, 745 F.2d 1 (Fed.Cir. 1984). The Applicant respectfully submits that this requirement has not been met under the present facts, and that the section 102(b) rejection is therefore improper.

Specifically, Schneider does not teach the limitation of a release agent with "silicone oil, wherein the volume of said silicone oil is in the range of about 15% to 25% of the total volume of said release agent." Because Schneider does not teach all of the elements and limitations of claim 1, Applicant submits that this rejection should be withdrawn.

Although Schneider has not been cited as a 103 reference, Applicant further submits that Applicant's release agent is non-obvious and patentably distinct. While both inventions may be properly characterized as "release agents", they have different uses which are reflected by their different formulations.

Oils, waxes, silicones and soaps generally have lubricating or "releasing" properties, but formulations incorporating these ingredients vary depending on the specific lubricating or releasing application. In the present invention, the Applicant has proposed a release agent formulation which may be used in industrial food baking applications. Schneider proposes a release agent for separating polyurethane foam molded parts from a mold. The two applications involve extremely disparate considerations.

For example, using water as a carrier in release agents for polyurethane molded form parts suffers from a number of disadvantages. (Schneider, Column 1, lines 44-46). This consideration prompted Schneider to develop a hydrocarbon/water formulation. (Schneider, Column 22-27). As reflected by Schneider's examples, the concentration of water was effectively reduced by using hydrocarbon solvents such as white spirit, parafinnic mineral oil and isoparaffin mixture. By using these organic solvents, the release agent only needed to consist of 20% to 35% water (Schneider, Examples 1 and 2).

Applicant was concerned with different criteria in developing the formulations of the present invention. Because the release agent is to be used on food products, toxicity is a significant concern. Also, as pointed out by the Applicant's specification, "prior art formulations contain a significant amount of carbon. Residual carbon tends to accumulate on the pans over the baking cycles. This carbon fouling becomes a significant problem, as it is difficult to remove." (Page 3, lines 1-3). Accordingly, the Schneider reference which is directed to the use of

hydrocarbon solvents to produce hydrocarbon/water emulsions and seeks to avoid the disadvantages of using water as a carrier teaches away from the present invention.

Rejection of claims 1-3 under 103(a) as being unpatentable over Callingham

The Examiner rejected claims 1-3 as being unpatentable over Callingham (4,264,585) for "reasons of record." In the previous office action, the Examiner argued that Callingham discloses a composition containing polydimethylsiloxane, wax, emulsifier, and water.

It should be noted from the outset that Callingham does not describe the use of an "ordinary" polydimethylsiloxane. The polydimethylsiloxane that Callingham is referring to is a highly refined, volatile polydimethylsiloxane that has a viscosity between .5 o 6 centistokes. (Column 1, lines 65-67). Callingham uses volatile polydimethylsiloxanes that will rapidly volatilise when applied to the skin. (Column 1, lines 37-43). Accordingly, these special polydimethylsiloxanes will evaporate rapidly at body temperature. (Column 1, lines 62-65).

One that is ordinarily skilled in the art would clearly infer from Applicant's specification that the silicone oil described and claimed by the Applicant is not the special refined polydimethylsiloxane used by Callingham. The proposed formulation is to be used in industrial baking applications where the temperatures substantially exceed that of the human body. There would be no silicone oil left on the food or pans to act as a release agent if Callingham's formulation was used. Accordingly, Callingham's patent, which described the use of a volatile polydimethylsiloxane that is designed to evaporate at body temperature, actually teaches away from using Applicant's silicone oil. There is no reason one that is ordinarily skilled in the art would be motivated to modify Callingham's invention to produce Applicant's proposed release agent.

In addition, the Callingham reference is non-analogous art and is therefore an

inappropriate reference for a rejection under § 103. A reference may not be pulled from a field in which one skilled in the art of the proposed invention would not be reasonably expected to look. This principle was explained by the old C.C.P.A. in the case of *In re Winslow*, 151 U.S.P.Q. 48 (C.C.P.A. 1966):

> Section 103 requires us to presume full knowledge by the inventor of the prior art in the field of his endeavor ... but does not require us to presume full knowledge by the inventor of prior art outside the field of his endeavor, i.e., of "nonanalogous" art. In that respect it only requires us to presume that the inventor would have had that ability to select and utilize knowledge from other arts reasonably pertinent to his particular problem which would be expected of a man of ordinary skill in the art to which the subject matter pertains.

151 U.S.P.Q. at 287 (with apologies for the antiquated gender-specific language).

The principles of non-analogous art have more recently involved into a two-stage test:

> First, we decide if the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved.

In re Wood, 599 F.2d 1032, 1036 (C.C.P.A. 1979). If a reference is outside the invention's field, yet nevertheless deals with the same problem addressed by the invention, it is a proper section 103 reference. If a reference is within the invention's field, yet seeks to solve a different problem, it is *not* a proper 103 reference. *In re Clay*, 966 F.2d 656 (Fed. Cir. 1992) (holding that a method of extracting crude oil was not a proper section 103 reference against a method for storing refined petroleum).

In the present case, the Callingham reference falls outside the Applicant's field of endeavor. The Callingham reference does not relate to the field of release agent compositions for baking. It relates to the field of antiperspirant compositions. (Column 1, lines 6-8). Since the reference is not within the field of invention, it must seek to solve the same problem or be

reasonably pertinent to the problem to be solved. It is not. The volatile polydimethylsiloxane is used by Callingham as a "thickener" that will evaporate at body temperature. (Column 1, lines 31-43). Applicant's invention is directed at solving the problem of carbon fouling on pans (where residual carbon accumulates on pans over baking cycles) while providing a release agent with suitable release properties for baking applications. (Page 3, lines 1-3 and line 12). Applicant respectfully submits that the two problems are simply unrelated. Furthermore, one that is skilled in the art would not look at an antiperspirant formulation which contains a substantial amount of hydrocarbons (see Column 3, lines 21-31) to solve a carbon fouling problem.

Rejection of claims 1-3 under 103(a) as being unpatentable over Hartung

The Examiner rejected claims 1-3 as being unpatentable over Hartung (5,436,007) since the stated range of ingredients are shown in Hartung's claim 1.

As argued with respect to the Callingham patent above, one that is ordinarily skilled in the art would not be motivated to modify the Hartung's proposed diaper rash formulation to produce a release agent formulation that may be used in industrial baking applications.

Further, as argued above with respect to the Callingham patent, the Hartung patent is non-analogous art. As such, Hartung is an improper § 103 reference. First, Hartung's diaper rash formulation is not in the same field as Applicant's release agent for baking applications. Hartung's formulation relates to a skin lotion for use in connection with diaper rash. (Column 1, lines 9-10).

The Hartung reference is also directed to solving a different problem and would not reasonably be interpreted as being pertinent to the problem that Applicant is attempting to solve. Generally, Hartung's formulation is directed to a lotion that inhibits feces and urine from

contacting the skin. (Column 6, lines 30-34). Hartung uses polydimethylsiloxane for its protectant properties. (Column 9, lines 59-63). These diaper rash formulations effectively work by creating a barrier between the skin and other liquids. (Column 2, lines 16-18). One that is ordinarily skilled in the art would have no reason to look at diaper rash formulations for guidance in solving the problems that the Applicant's invention addresses. As stated with respect to the Callingham reference, Applicant's invention is directed at solving the problem of carbon fouling on pans while providing a release agent with suitable release properties for baking applications.

Rejection of claims 1-23 as being unpatentable over Ball in view of Lissant

The Examiner rejected claims 1-23 under 35 U.S.C. §103(a) as being unpatentable over Ball (5,096,617) in view of Lissant (3,892,881) for reasons of record.

It is axiomatic that the prior art to be considered under section 103 must be analyzed in the absence of any teaching from the claimed invention. Such an evaluation requires the often difficult task of excluding anything taught or suggested by the present invention from one's mind. *Loctite Corp. v. Ultraseal Ltd.,* 781 F.2d 861 (Fed.Cir.1985).

In the abstract, this proposition is straightforward. However, courts have often struggled in applying it to relatively simple inventions. This is true because a relatively simple invention - once revealed by its creator - is easily understood. Thereafter, one is prone "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed.Cir. 983).

The United States Court of Appeals for the Federal Circuit recently discussed this issue in the case of *In Re Dembiczak*, 175 F.3d 994 (Fed.Cir. 2000), *limited on other grounds by In Re*

Gartside, 203 F.3d 1305 (Fed.Cir.2000). *Dembiczak* involved a patent claim on the now-familiar orange trash bags with the printed Jack-O-Lantern faces.

The Dembiczak patent application was rejected by the U.S.P.T.O., then rejected by the Board of Patent Appeals and Interferences. In reversing these decisions, the Federal Circuit noted that "[T]he best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references." *Id.* at 999.

The evidence of a suggestion, teaching, or motivation to combine prior art references must be established in order to set forth a prima facie case of obviousness. *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 297 (Fed.Cir.1985). This evidence must come from the prior art references themselves, the knowledge of one who is skilled in the art, or from the suggestions inherent in the nature of a problem to be solved. *ProMold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed.Cir.1996). The suggestion of combination generally comes from the teachings within the references themselves. *In Re Rouffet*, 149 F.3d 1350, 1359 (Fed.Cir.1998).

The Applicant respectfully submits that the requirements for a prima facie case of obviousness have not been established in this case. Instead, the Applicant suggests that the P.T.O has fallen into the trap the *Dembiczak* opinion warns so sternly against - that of using the inventor's own disclosure to suggest combinations in order to defeat patentability.

In addition, a prior art reference does not create a case of prima facie obviousness if it fails to disclose a material element or limitation claimed in the present invention. *In re Evanega*, 829 F.2d 1110 (Fed. Cir. 1987). Ball does not teach the use of silicone oil as part of the final formulation. Ball simply described that silica may be sprayed with silicone oil and heated to

produce the hydrophobic silica which is used in the final formulation. (Column 3, lines 1-35). Accordingly, Ball and Lissant, when taken together still do not teach a formulation having the components of Applicant's formulation. Since no formulation is taught which comprises all of the components of Applicant's release agent, Applicant respectfully submits that the rejection of claims 1-23 under §103 is improper.

Furthermore, as argued previously with respect to the Callingham and Hartung references, it is inconceivable that one that is ordinarily skilled in the art would be motivated to modify Ball's defoamer so that it may be used as a release agent.

Also, as argued with respect to the Callingham and Hartung references, both the Ball and Lissant references are non-analogous art. As such, both references are improper §103 references. First, neither Lissant's cosmetic nutritive composition nor Ball's defoamer are in the same field as Applicant's release agent for baking applications. Lissant's formulation relates to a lotions or preparations which may be used on the body for cosmetic, nutritive, or pharmaceutical functions (Examples 1-12). Ball's formulation relates to a composition which prevents the formation or accumulation of fluid foams. (Column 1, lines 5-20).

The Ball and Lissant references are directed to solving problems that are entirely unrelated to the problem that Applicant is attempting to solve. Lissant's formulation is directed to improving certain cosmetic, nutritive or pharmaceutical objectives. One that is ordinarily skilled in the art would have no reason to look at such improvements for guidance in solving the problems that the Applicant's invention addresses.

Furthermore, as stated above, the Ball invention is directed at solving the problem of foam formation and accumulation. One that is ordinarily skilled in the art would not be compelled to look at defoamers to solve the problems that the Applicant's invention addresses –

namely, providing a suitable release agent for baking applications which will not cause carbon fouling.

Rejection of claims 1 & 20-23 under 35 U.S.C. § 112

Applicant believes that the Examiner rejected claims 1 & 20-23 because these claims recite the various components in terms of mass percentage when Applicant's specification mostly describes the components in terms of volume percentage. Applicant has amended the claims so that the claims recited the components in terms of volume percentage. The ranges described in claims 1 & 20-23 are both supported by the listed examples, and are described on Page 10 of the Specification, lines 3-10. The specification also described that other oils may be substituted for a portion of the silicone oil. (Page 10, lines 11-15).

Conclusion

Based on the foregoing, the Applicant hereby respectfully requests that the Examiner reconsider the pending claims.

Respectfully submitted this 23rd day of Feb., 2006.

JOHN WILEY HORTON
Pennington, Moore, Wilkinson, Bell
& Dunbar, P.A.
P.O. Drawer 10095
Tallahassee, FL 32302-2095
850-222-3533
Reg. No. 41,851
Attorney for Applicant